

## Savanna burning: role and opportunities in a rangelands carbon economy

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Meat and Livestock Australia is delighted to have been asked to help sponsor this Special Issue of **The Rangeland Journal** on 'Savanna burning: role and opportunities in a rangelands carbon economy'. For many years Meat and Livestock Australia has been involved with research work in northern Australia connected with understanding the role of fire to raise the productivity of cattle properties. Historically, most of this research around fire has been focussed on the major issues of balancing cover of woody vegetation and pasture growth, and on other impacts such as on the organic matter and carbon content of soils. The focus of this investment in research to date has been on essential questions around the use of fire as a management tool within cattle operations and how this affects profit and productivity. These questions have included the optimum frequency and timing of fires, the effect of soil type and vegetation, and the impacts of fire on soil organic matter and carbon sequestration.

As Walsh *et al.* (2014) have noted in this issue, more than 30% of the Earth's surface experiences significant fire activity and about 20% of the world's land area of savanna is burnt annually. This contributes to as much as 10% of global greenhouse-gas emissions and, in Australia savannas, burning contributes 2–4% of Australia's annual greenhouse-gas emissions.

The fascinating story behind this Special Issue is that the long-term work, such as the study at Kidman Springs, funded by the Northern Territory Government and, in part, by Meat and Livestock Australia, has become of even greater relevance as the policies of the world's governments has evolved to focus on the importance of the role of carbon in the environment. This is a good example of research being started for one reason but ending up being of benefit for quite a new and different reason.

Policy changes within Australia about carbon have been many and significant but, since 2007, each government has

committed to a reduction in national greenhouse-gas emissions, albeit through different policy routes. The development of carbon-trading schemes in other countries means it is likely that the demand for carbon credits will rise in the future. So one new question for landholders in northern Australia is "how can they take advantage of these policy changes"? The countervailing challenge is that, in some areas of the north of Australia, more fire may be needed to control the growth of woody vegetation within grazed rangelands to optimise livestock carrying capacity.

This Special Issue not only deals with the scientific issues around fire management but, in a significant contribution, sets out the legal issues surrounding ownership of carbon rights under different land tenures. One of the challenges is that a high frequency of fire does not, in general, correlate with high densities of cattle in northern Australia and, therefore, raises the question of how the cattle industry might benefit from these policy changes. Papers within this issue suggest that, within commercial cattle properties, there are areas of the landscape that are less suited to cattle production and this offers opportunities to implement fire regimes to take advantage of carbon-crediting schemes.

I commend the editors and authors for their initiative in preparing this Special Issue, the science behind the papers and their willingness to contribute to the cattle industry and national policy imperatives of northern Australia.

### Reference

- Walsh, D., Russell-Smith, J., and Cowley, R. (2014). Fire and carbon management in a diversified rangelands economy: research, policy and implementation challenges for northern Australia. *The Rangeland Journal* 36, 313–322.